



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/341,225	09/29/1999	BERND BRETSCHNEIDER	60680-1281	4893
10291	7590	07/23/2004	EXAMINER	
RADER, FISHMAN & GRAUER PLLC 39533 WOODWARD AVENUE SUITE 140 BLOOMFIELD HILLS, MI 48304-0610			LONEY, DONALD J	
			ART UNIT	PAPER NUMBER
			1772	

DATE MAILED: 07/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/341,225	BRETSCHNEIDER ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Donald Loney	1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 19 April 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 29-31, 33-49 and 51-62 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 29-31, 33-48 and 60-62 is/are allowed.
- 6) ☒ Claim(s) 49, 51-54, 56, 58 and 59 is/are rejected.
- 7) ☒ Claim(s) 55 and 57 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Terminal Disclaimer***

1. The terminal disclaimer filed on April 19, 2004 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US Pat. No. 6279229 has been reviewed and is accepted. The terminal disclaimer has been recorded.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 49,51 and 52 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Brooks et al (2989156).

Brooks et al discloses a heat insulating panel that has two metal face plates (21,22) with a layer of compacted perlite powder (71) there between. The sheets are connected by either elements 23,24 or 73 as shown in the figures. Refer to figures 1 and 2 along with column 2, lines 25-59.

4. Claims 49,51 and 52 are rejected under 35 U.S.C. 102(b) as being anticipated by Sextl et al (5316816).

Sextl et al discloses a metal encased powder mica and/or perlite used for heat shields. Refer to column 3, lines 26-50, and column 5, and lines 40 and 41, column 6 lines 16 and 17 and column 7, lines 5, 6, 35 and 36 along with Figure 6. The

additional substances (i.e. perlite and/or mica) are disclosed as being in powder form (column 4, line 68). The panel is disclosed as being evacuated, which would inherently compact the material inside. Refer to column 6, lines 50-60 in Pogorski et al (6221456) and column 2, lines 5-10 in Glicksman et al (5032439) as teaching references to the fact that evacuating the panel would at least somewhat compact the insulation therein. Sextl et al also teaches to press the powder in column 3, lines 58 and 59.

5. Claims 49,51,52,53,54,56,58 and 59 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawasaki et al (4669632).

Kawaski et al discloses an evacuated heat shield that has at least one metal layer (22) in a face sheet and perlite powder (14) inside. A metal coating (either 42 or 52) can be located on the out side, meeting instant claim 56. Refer to Fig. Nos. 3-5 and 7-10 along with column 2, lines 34-69, column 3, lines 8-39 and column 4, lines 16-41. The shield has a deformation bulge due to the top and/or bottom surface being protruding upwards from the edges as shown in figures 2,3,7 and 9, meeting instant claims 53 and 54. The insulation material is thinner as it approaches the sealed edges of the shield, meeting instant claim 58. The compacted limitation is deemed inherent for the same reason as explained above in relation to evacuating the shield.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 53,54,58 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Brooks et al or Sextl et al in view of Jackson (3302358).

The primary references teach the invention substantially as recited except for the specific deformations, varying thickness of the insulation and sections of the shield that are keep free from insulation.

Jackson discloses that thickness of the perlite insulation in a heat shield will vary due to the outer layers containing deformation including protrusions (12) and/or dimples (15). Refer to figures 2 and 3. There are also sections of the shield that have no insulation (section between 8c and 9a) below corrugation 4 in figure 2. These features aid to counteract the effect of contraction or expansion due to large temperature changes (column 4, lines 18-22). Refer to column 3, lines 35-39 and column 3, line 62 through column 4, line 22.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to the primary references to include varying thicknesses and have sections free of insulation material, as taught by Jackson, for the purpose of counter effecting heat changes in any desired location of the shield required in its application.

Claim 56 is rejected under 35 U.S.C. 103(a) as being unpatentable over either Sextl et al or Brook et al in view of Steck et al.

The primary references teach the invention substantially as recited except for the heat reflecting foil on the outside of an insulating panel.

Steck teaches to include a heat reflecting film (17, 18) on the outside of an insulation panel. Refer to column 4, lines 18-25.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to the primary references to include a heat reflecting film on the outside of the face sheets, as taught by Steck, for the purpose of reflecting heat away from what the shield is intended to protect.

#### ***Response to Arguments***

8. Applicant's arguments with respect to claims 29-31,33-49 and 51-62 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Allowable Subject Matter***

9. Claims 29-31,33-48 and 60-62 are deemed allowable in view of the applicant's arguments filed April 19, 2004 since the prior art fails to teach a method of forming a heat shield wherein the insulating material is compacted as recited in the particular steps recited in claim 29 and 60.

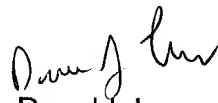
10. Claims 55 and 57 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art fails to teach the increased roughness and opposite side of the shield from the coated side containing the modification as recited in claims 55 and 57, respectively.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald Loney whose telephone number is (571) 272-

1493. The examiner can normally be reached on Mon-Fri. 8AM-4PM, maxi-flex schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 571 272-1498. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Donald Loney  
Primary Examiner  
Art Unit 1772

DJL:D.Loney  
07/19/04